UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,024	07/30/2007	Xavier Arques	11345/122001	1377

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OSHA LIANG L.L.P.
TWO HOUSTON CENTER
909 FANNIN, SUITE 3500
HOUSTON, TX 77010

EXAMINER
OKEKE, ONYEDIKA C

ART UNIT	PAPER NUMBER
2425	

NOTIFICATION DATE	DELIVERY MODE
02/19/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@oshaliang.com
buta@oshaliang.com

	Application No.	Applicant(s)
Office Action Summary	10/582,024	ARQUES, XAVIER
	Examiner	Art Unit
	Dika Okeke	2425

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 July 2007</u>.
2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-31</u> is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-31</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>08 June 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a)☒ All　b)☐ Some * c)☐ None of:
　　　1.☒ Certified copies of the priority documents have been received.
　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.
　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date <u>06/08/2006</u>.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____ .

DETAILED ACTION

Priority

1.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which

papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1-3, 8-10, 12, 13-15, 20-22, 24, 26, 30 and 31 are rejected under 35 U.S.C.

102(b) as being anticipated by Fred Halsall ("*Data Communications, Computer Networks

and Open Systems*", 4th Edition, 1996), referred herein as 'Halsall'.

Regarding claim 1, Halsall teaches a method of recovering information in an

interactive digital television system, in which information from a transmission centre

(Primary, P) is transported in a data stream (Information or I-frames) to at least one

terminal device (Secondary, S) in which one or more applications are running, the

method comprising:

a step of loading and storing the information in a memory provided in the terminal

device (fig. 4.13a; *for S has a buffer or memory – Contents of link receive list – for storing the*

transmitted I-frames),

a step of receiving from the at least one application a request to recover the information

(fig. 4.13a, NAK [N+1]; *for the LS_user application layer interface sends a data request to the S*

layer; which then explicitly requests a retransmission or recovery of the N+1 I-frame by sending

a Not AcKnowledged signal);

a step of recovering of the information from an information carrier-containing the

information and provision of the duly recovered information to the at least one

application sending the request (I [N+1]; *for P recovers the N+1 I-frame from its buffer –*

Contents of link retransmission list and resends it to the S terminal, which then sends it back to

the LS_user); and

the step of searching for the information, according to at least one predefined selection

criterion, in at least one of the information carriers formed by the data stream, and the

memory (*for P, upon an implicit or explicit signal of non-receipt by S, searches for the missing*

or corrupted I-frame in its memory and transmits it to S; for S only send the request to P after

the absence of such requested I-frame in its memory or buffer).

Regarding claim 2, Halsall teaches the method as claimed in claim 1, wherein the

search step comprises the sub-step of:

searching for the information in the memory (*for it is noted that for S to request the delivery*

of the missing frames from P, upon an L_DATA. request; it must have looked in its memory -

the Contents of link receive list – to check if the data is contained there).

Regarding claim 3, Halsall teaches the method as claimed in claim 1, wherein

characterized in that the search step comprises the sub-step of:

searching for the information in the data stream (*for P searches for the requested I-frame in its stream and delivers it to S*).

Regarding claim 8, Halsall teaches the method as claimed in claim 1, further comprising the step of defining at least one of the selection criterion by the application (*noting the discussions of claims 2-3, for the LS_user application interface seeks a frame from S, which initiates a re-transmission request from P; it is noted that in order for the LS_user to look for the frames in the Contents of link receive list located in the buffer or memory of S, which is itself a selection criterion*).

Regarding claim 9, Halsall teaches the method as claimed in claim 1, further comprising the step of defining at least one of the selection criterion by an intermediate software layer and/or a hardware layer of the terminal device (figs. 4.3 and 4.4; Pages 174-177; **note the discussions on claim 8 above;** *for application layer protocols control the communication between two different devices; Data Link Layer is also used for Error Control*).

Regarding claim 10, note the discussions in claims 8 and 9 above. Halsall clearly teaches multiple Data Terminal Equipment (pgs. 168 and 174; DTEs, computers) implementing the teachings of claim 1. The application layer and intermediate software or hardware layers are all evident and implemented in the DTEs and computers.

Regarding claim 12, Halsall teaches the method as claimed in claim 1, further comprising the step of formatting the recovered information before supplying the latter to the at least one application sending the request (see fig. 4.5; **"Format and Transmit I-**

frame"; *for the recovered I-frame is formatted at the Primary before being sent to the Secondary*

for subsequent usage at the LS_user application).

Claims 13-15, 20-22 and 24 are analyzed as devices of claims 1-3, 8-10 and 12

respectively.

Claim 26 is analyzed as an apparatus for the implementation of claim 13.

Claim 30 is analyzed as a device of claim 26.

Claim 31 is analyzed as a system of claim 26.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 4-5 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Halsall (*"Data Communications, Computer Networks and Open Systems"*, 4th Edition,

1996).

Regarding claims 4 and 5, Halsall teaches the method as claimed in claim 1.

However, it fails to teach wherein the search step comprises the sub-steps of:

searching for the information in the memory after an unsuccessful search in the data

stream; searching for the information in the data stream after an unsuccessful

search in the memory.

Halsall clearly shows a search for the information in the memory and the data stream

separately as attested in claims 2 and 3 above; for in order for S to request a re-

transmission of a N frame (according to the command or request of a LS_user

application), it must have searched in it's memory or contents receive list and upon the

absence of such frame there; it subsequently requests it from the data stream in P.

Further, in the Selective reject error control scheme (fig. 4.13a), the Secondary searches

the data stream and acknowledges the receipt of each frame with an ACK-frame; upon

a non-receipt of the I(N+1) frame from the Primary, the S searches its contents receive

list to see if it is there and then returns as NAK (N+1) denoting that it is not in its

received list and thus requires a retransmission.

Therefore, it would be obvious to one of ordinary skill in the art at the time that the

invention was made to modify the teaching of Halsall and make the system search first

in the data stream prior to searching in the memory for the purpose of error correction

and ensuring that a user gets the proper data stream, in the right sequence, for full

comprehension.

        Claims 16 and 17 are analyzed as devices of claims 4 and 5 respectively.

6.   Claims 6-7, 11, 18-19, 23, 25 and 27-29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Halsall in view of Penk et al (US Patent Application Publication No.

2003/0074670), referred herein as 'Penk'.

Regarding claim 6, Halsall teaches claim 1. However, it does not teach wherein the information is encapsulated in at least one MPEG table identified by a respective table identifier. Penk teaches wherein the information is encapsulated in at least one MPEG table identified by a respective table identifier (paragraphs 3-5; *for MPEG data streams are transmitted in tables which include identifiers used to identify the streams*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Halsall and Penk – to encapsulate and store the I-frames as MPEG files in tables with certain identifiers - for the purpose of properly locating and identifying the frames.

Regarding claim 7, Halsall in view of Penk teach the method as claimed in claim 6, wherein the search step comprises the sub-step of searching for the MPEG table from its respective table identifier whereas the recovery step comprises the sub-step of recovering the information from the duly identified MPEG table. If the information stream is encapsulated in an MPEG table referenced by a table identifier (as taught by Penk), then upon a request of re-transmission, P would search the data stream in its memory (using the table or packet identifiers) to locate the MPEG table and then delivering the data in the MPEG table to complete the recovery process.

Regarding claim 11, Halsall in view of Penk teach the method as claimed in claim 6. Halsall further teaches the step of storing the information in the memory according to a structural organization similar to that of the information in the data stream (see pgs. 189-191; fig. 4.12, link receive list [in memory at S], link retransmission

list [data stream]; *for if the frames are received out of sequence, S retains them queued in the*

link receive list until the next in-sequence frame is received so it can be delivered to the user in

the correct sequence matching the information that is in the data stream).

Claims 18-19 and 23 are analyzed as devices of claims 6-7 and 11 respectively.

Claim 25 is analyzed as an apparatus for the implementation of claim 1. Further

Penk describes a decoder/receiver device for communicating with a headend to receive

broadcast signals and streams (fig. 1; paragraphs 8 and 32).

Claim 27 is analyzed as a device of claim 25.

Claim 28 is analyzed as a system of claim 25.

Claim 29 is analyzed as a system of claim 27.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure:

8.   Das Sharma (US Patent Application Publication No. 2003/0172335) teaches a

dynamic retransmission apparatus, where acknowledgements are sent back from

destination nodes to denote reception of data.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dika Okeke whose telephone number is (571)270-5367.

The examiner can normally be reached on Monday - Thursday, 9:00 a.m. to 7:00 p.m.,

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Brian Pendleton can be reached on (571)272-7527. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dika Okeke/
Examiner, Art Unit 2425
February 10, 2009.

/Brian T. Pendleton/
Supervisory Patent Examiner, Art Unit 2425